

## Global BioSurveillance: Enabling Science and Technology 2<sup>nd</sup> Biothreat Nonproliferation Conference

January 19 ~ 21, 2011, Santa Fe, NM

Sponsored by:  
Los Alamos National Laboratory  
US Department of State  
US Department of Defense

### Bishop's Lodge, Santa Fe, NM Conference Agenda

#### Tuesday, January 18, 2011

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**7:00 PM ~ 9:00 PM: Opening Discussion and Panel Chair Meeting**

- Pre-conference information exchange: Recent National Academy of Science discussions on science and technology development at global level
- Panel chair pre-conference coordination

#### Wednesday, January 19, 2011

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**7:30 AM ~ 8:30 AM:** Collaboration Discussion, Breakfast

**8:30 AM ~ 9:00 AM:** Welcome, Conference Objectives  
William Rees Jr., LANL Principal Associate Director for Global Security

**9:00 AM ~ 9:40 AM:** Keynote: Dan Gerstein, Office of Secretary of Defense  
A Political Perspective

**9:40 AM ~ 10:20 AM:** Keynote: Rita Colwell, University of Maryland/Johns Hopkins University  
A technical perspective: Framing Biosurveillance Needs, Challenges, and Opportunities

**10:20 AM ~ 10:40 AM: Brief Coffee Break**

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Institutional Host: Dr. William Rees, Jr.  
Technical Hosts: Dr. Helen Cui; Dr. Gary Resnick; Dr. Tammy Taylor  
Visit Planners: Mr. Adam Shipman; Ms. Lynn Chavez  
Dress Attire: Business Casual



**10:40 AM ~ 12:00 PM: Biosurveillance Challenges and Opportunities**

- Rebecca Katz: Moving Towards Comprehensive Global Biosurveillance, summaries of recent high level meetings
- WHO: Global Health Challenges and Needs (IHR implementation)
- Global Security Implications

**12:00 PM ~ 2:00 PM: Working Lunch:**

PREDICT: detect and prevent spillover of pathogens between wildlife and people

**2:00 PM ~ 3:30 PM: Biosurveillance for One Health**

- IHR implementation by scientific advancement
- International scientific collaboration
- Global Biosurveillance in medicine and public health
- Global Biosurveillance in agriculture

**3:30 PM ~ 4:00 PM: Brief Coffee Break**

**4:00 PM ~ 5:30 PM: Breakout Session I (by Impact Areas):**

1. Biosurveillance in medicine and public health
2. Biosurveillance in agriculture
3. Environmental surveillance

Discussion Topics:

- Current biosurveillance systems, and major improvement insight in near future
- Major challenges, and improvement necessary to overcome the challenges
- Current response to surveillance signals
  - Unusual disease outbreak identification and prediction
  - Pandemic preparedness, response and prevention, and public health intervention

**6:30 PM ~ 8:30 PM: Poster Session/Reception**

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Dress Attire:

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**Thursday, January 20, 2011**

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7:30 AM ~ 8:30 AM: Collaboration Discussion, Breakfast

8:30 AM ~ 8:45 AM: Welcome, Recap of Day I  
Nan Sauer, LANL Associate Director for Chemistry, Life and Earth Sciences

8:45 AM ~ 10:45 AM: **Scientific basis for global infectious disease surveillance:**

- A comprehensive view from microbiology and infectious diseases
- Pathogen evolution, a major challenge and research direction
- Disease surveillance research and technology development in countries and regions
- Host-pathogen interaction as a critical research area for GBSV
- Scientific basis for a comprehensive surveillance system and its components
- The parameters to be included in the surveillance
- Emerging infectious disease, signs and parameters, from pathogens and hosts
- Influence and consideration of climate change

10:30 AM ~ 10:50 AM: Brief Coffee Break

10:50 AM ~ 12:30 PM: **Emerging Technologies for Biosurveillance**

- Biosurveillance technology development at research laboratories
- Environmental biosurveillance technology
- Technology support for a global biosurveillance network.
- Surveillance technologies to address the parameters to be monitored
- Status of component technologies (sensors, signatures, information science & technology, communication, knowledgebase)
- Major challenges
- High throughput technology and laboratory automation
- Identification of technology gaps
- High impact innovations on the near term horizon

12:30 PM ~ 3:00 PM: Working Lunch: Poster Session

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3:00 PM ~ 5:00 PM: **Surveillance Information Science and Technology**

- Biosurveillance data collection, management, sharing, at global level
- Data analysis, integration, visualization
- Integrative modeling to improve timely and accurate prediction
- Future by advanced information science and technology, high performance computing

7:00 PM ~ 9:00 PM: **Plenary Talk with Dinner:**

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## Friday, January 21, 2011

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[7:30 AM ~ 8:30 AM](#): Collaboration Discussion, Breakfast

[8:30 AM ~ 8:45 AM](#): Recap of Day I and II

[8:45 AM ~ 10:30 AM](#): **Breakout Session II (by disciplinary areas):**

4. Scientific Basis for GBSV
5. Emerging Technologies
6. Information Science and technology

[10:30 AM ~ 11:00 AM](#): [Brief Coffee Break](#)

[11:00 AM ~ 12: 30 PM](#): **Breakout Session Out-Briefing:  
Toward Integrated Biosurveillance Systems**

- Synergy of environmental and public health medical surveillance systems
- Challenges and gaps
- Current impediment (political, technical, financial) and how to overcome
- Accelerating development, assessment and applications
- Global Biosurveillance architecture, comprehensive and practical

[12:30 PM ~ 2:00 PM](#): Working Lunch,

[2:00 PM ~ 2:30 PM](#): Conference Conclusion, Adjourn

[3:00 PM ~ 4:00 PM](#): Session Chair post-conference discussion, proceeding preparation

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